

## ABSTRACT

**[0175]** Composition and method for stimulating angiogenesis, stimulating myogenesis, upregulating angiogenic factors and angiopoietins, and treating the muscular and vascular complications of diabetes. Overall, the embodiments of the invention can be accomplished by delivering a heterologous nucleic acid sequence encoding insulin-like growth factor I (“IGF-I”) or a functional biological equivalent thereof into the cells of the subject and allowing expression of the encoded gene to occur while the modified cells are within the subject. The nucleic acid sequence may be delivered by a vector system including a synthetic myogenic promoter and a 3’ untranslated region. The preferred method to deliver the constitutive or inducible nucleic acid encoding sequences of IGF-I or the functional biological equivalents thereof is directly into the cells of the subject by the process of *in vivo* electroporation.